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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/630,435	08/01/2000	Hwai-Tzuu Tai	81346JDL	5694

7590 06/27/2007
Lawrence P Kessler
Patent Department
NexPress Solutions LLC
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Rochester, NY 14653-7001

EXAMINER

THOMPSON, JAMES A

ART UNIT	PAPER NUMBER
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2625

MAIL DATE	DELIVERY MODE
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06/27/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

09/630,435

Applicant(s)

TAI ET AL.

Examiner

James A. Thompson

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 24 April 2007 and 26 March 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 40-44, 46 and 48-59 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 40-44, 46 and 48-59 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 11 May 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

DOUGLAS Q. TRAN
PRIMARY EXAMINER

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____

- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 24 April 2007 has been entered.

Response to Arguments

2. Applicant's arguments filed 26 March 2007 have been fully considered but they are not persuasive. Examiner agrees with Applicant that the prior combination of Rourke (USPN 5,995,721) in view of Barry (USPN 5,596,416) does not fully teach the presently amended and newly added claims. However, additional prior art has been discovered which does fully teach the presently recited claims. Thus, Applicant's arguments and amendments are fully addressed by the newly presented prior art rejections set forth below.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

4. **Claims 42, 44, 46, 48, 52 and 56 are rejected under 35 U.S.C. 102(e) as being anticipated by Behlok (US Patent 6,469,805 B1).**

Regarding claim 48: Behlok discloses a method comprising: rasterizing image data of a print job to provide rasterized image data (column 5, lines 23-28 of Behlok); storing said rasterized image data in a job image buffer (column 5, lines 17-28 of Behlok – *job image buffer inherent in IPS since RIPped data must be stored on IPS at least during RIPping process*); outputting said rasterized image data from

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said job image buffer to provide output data (figure 2(104) and column 6, lines 4-6 of Behlok); changing said output data in accordance with an operator's adjustments (column 6, lines 12-17 of Behlok); halftoning said changed output data to provide halftone rendered data (column 7, lines 38-40 of Behlok); and printing said print job from said halftone rendered data (column 7, lines 40-44 of Behlok), wherein said changing is during said printing, thereby resulting in a corresponding contemporaneous change in appearance of said printed print job (column 7, lines 1-22 of Behlok – *adjustments applied to post-RIP contone image data without any need for re-RIPping, and thus occurs during the printing of the print job*).

Regarding claim 52: Behlok discloses a method comprising: rasterizing image data of a print job into one or more pages of rasterized image data (figure 2(108) and column 5, lines 23-33 of Behlok); separating said rasterized image data into separated rasterized contone gray level image data (column 5, lines 37-40 and column 5, line 60 to column 6, line 3 of Behlok – *demonstrates that RIPped data is separated into CMYK color separations, each color separation having contone gray level image data*); storing said separated rasterized image data in a job image buffer (column 5, lines 17-28 of Behlok – *job image buffer inherent in IPS since RIPped data must be stored on IPS at least during RIPping process*); producing each of a plurality of document sets (column 7, lines 38-44 of Behlok), said producing of each said set including: outputting said separated rasterized image data from said job image buffer to provide output data (figure 2(104) and column 6, lines 4-6 of Behlok); altering said output data in accordance with an operator's adjustments (column 6, lines 12-17 of Behlok); subjecting said altered output data to a halftone process to generate halftone rendered data (column 7, lines 38-40 of Behlok); and printing a document set from said halftone rendered data (column 7, lines 40-44 of Behlok), wherein said altering is in real-time during said printing of each of said sets (column 7, lines 1-22 of Behlok – *adjustments applied to post-RIP contone image data without any need for re-RIPping, and thus occurs during the printing of the sets*).

Regarding claim 42: Behlok discloses that said rasterized image data is rasterized CMYK image data (column 5, line 62 to column 6, line 3 of Behlok).

Regarding claim 46: Behlok discloses that said data is not re-rasterized prior to said printing (column 7, lines 14-22 of Behlok – *adjustments applied to post-RIP contone image data without any need for re-RIPping*).

Regarding claim 56: Behlok discloses an image processing system (figure 1 of Behlok) comprising: a raster image processor (figure 1(48) of Behlok) rasterizing image data of a print job having a plurality of document sets (column 5, lines 23-33 of Behlok); a job image buffer storing said rasterized

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image data (column 5, lines 17-28 of Behlok – *job image buffer inherent in IPS since RIPped data must be stored on IPS at least during RIPping process*); a printer (figure 1(26) of Behlok) printing each of said document sets of said print job (column 7, lines 40-44 of Behlok); and an image processor (figure 1(18) of Behlok) repeatedly receiving said rasterized image data from said job image buffer (column 7, lines 1-22 of Behlok – *adjustments applied to post-RIP contone image data without any need for re-RIPping*), changing said data in accordance with an operator's adjustments (column 6, lines 12-17 of Behlok) and halftoning said data (column 7, lines 38-40 of Behlok), and then delivering said data to said printer for use in printing respective ones of said document sets (column 7, lines 40-44 of Behlok).

Regarding claim 44: Behlok discloses that said rasterized print job is rasterized CMYK image data (column 5, line 62 to column 6, line 3 of Behlok).

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. **Claims 40-41, 43, 49, 51, 53, 55, 57 and 59 are rejected under 35 U.S.C. 103(a) as being unpatentable over Behlok (US Patent 6,469,805 B1) in view of Hayashi (US Patent 5,790,282).**

Regarding claim 40: Behlok discloses that the changing step changes color characteristics (column 6, lines 20-24 of Behlok).

Behlok does not disclose expressly that the changing step changes a color saturation.

Hayashi discloses changing a color saturation (column 8, lines 30-37 of Hayashi).

Behlok and Hayashi are combinable because they are from the same field of endeavor, namely digital image data processing, correction and alteration in color image data printing devices. At the time of the invention, it would have been obvious to a person of ordinary skill in the art to specifically have color saturation as one of the color characteristics that can be changed. The suggestion for doing so would have been that Behlok allows for many different types of color and image correction, and color saturation is another attribute that affects the overall appearance of an output image, and would thus be a useful attribute to allow a user to modify. Therefore, it would have been obvious to combine Hayashi with Behlok to obtain the invention as specified in claim 40.

Regarding claims 41 and 43: Behlok discloses that the altering changes color characteristics (column 6, lines 20-24 of Behlok).

Behlok does not disclose expressly that the altering changes a color saturation.

Hayashi discloses changing a color saturation (column 8, lines 30-37 of Hayashi).

Behlok and Hayashi are combinable because they are from the same field of endeavor, namely digital image data processing, correction and alteration in color image data printing devices. At the time of the invention, it would have been obvious to a person of ordinary skill in the art to specifically have color saturation as one of the color characteristics that can be altered. The suggestion for doing so would have been that Behlok allows for many different types of color and image correction, and color saturation is another attribute that affects the overall appearance of an output image, and would thus be a useful attribute to allow a user to modify. Therefore, it would have been obvious to combine Hayashi with Behlok to obtain the invention as specified in claims 41 and 43.

Regarding claims 49, 53 and 57: Behlok does not disclose expressly performing first and second halftone processes on said output data to produce first and second halftoned data, respectively, and blending said first and second halftoned data.

Hayashi discloses performing a first halftone process on image data to produce first halftoned data (figure 2(46) and column 4, lines 63-67 of Hayashi) and a second halftone process on image data to produce second halftoned data (figure 2(47) and column 4, line 67 to column 5, line 3 of Hayashi), and blending said first and second halftoned data (figure 2(48) and column 5, lines 3-6 of Hayashi). The image data is saturation adjusted by the color correction circuit (figure 2(43) and column 5, lines 18-20 of Hayashi). Said image data is then sent through two halftone processing devices. Said devices are the image quality correction circuit (figure 2(46) and column 4, lines 63-67 of Hayashi) and the gradation adjustment circuit (figure 2(47) and column 4, line 67 to column 5, line 3 of Hayashi). Since the CMYK halftone data is processed by passing said CMYK halftone data successively through said image quality correction circuit and said gradation adjustment circuit, said CMYK halftone data is effectively blended since factors from both operations have adjusted said CMYK halftone data before being sent to the output processor (figure 2(48) and column 5, lines 3-6 of Hayashi).

Behlok and Hayashi are combinable because they are from the same field of endeavor, namely digital image data processing, correction and alteration in color image data printing devices. At the time of the invention, it would have been obvious to a person of ordinary skill in the art to perform the two halftone processes and the blending process taught by Hayashi to the image data with the image processor taught by Behlok. The motivation for doing so would have been that both halftone operations improve

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the overall quality of the resultant image (column 4, lines 65-67 and column 5, lines 1-3 of Hayashi). Therefore, it would have been obvious to combine Hayashi with Behlok to obtain the invention as specified in claims 49, 53 and 57.

Regarding claims 51 and 59: Behlok discloses that said rasterized image data (or print job) is color separated contone gray level image data (column 5, lines 37-40 and column 5, line 60 to column 6, line 3 of Behlok – *demonstrates that RIPped data is separated into CMYK color separations, each color separation having contone gray level image data*).

Behlok does not disclose expressly that said printing further comprises recording said halftone rendered data on a recording surface as a plurality of color separation images in a superposed registered relationship and transferring said superposed color separation images to a receiver sheet to form a process color image.

Hayashi discloses recording halftone rendered data on a recording surface (column 3, lines 35-54 of Hayashi) as a plurality of color separation images (column 3, lines 33-34 and lines 60-67 of Hayashi), in superposed registered relationship (column 3, lines 54-67 of Hayashi) and transferring said superposed color separation images to a receiver sheet to form a process color image (column 3, lines 60-67 of Hayashi).

Behlok and Hayashi are combinable because they are from the same field of endeavor, namely digital image data processing, correction and alteration in color image data printing devices. At the time of the invention, it would have been obvious to a person of ordinary skill in the art to print an image and plural color separation images on a receiver sheet in superposed registered relationship, as taught by Hayashi, wherein the image is the changed RIP Data taught by Behlok. The motivation for doing so would have been to provide an output for the resultant color image (column 3, lines 33-34 of Hayashi). Therefore, it would have been obvious to combine Hayashi with Behlok to obtain the invention as specified in claims 51 and 59.

Regarding claim 55: Behlok does not disclose expressly that said printing further comprises recording said halftone rendered data on a recording surface as a plurality of color separation images in a superposed registered relationship and transferring said superposed color separation images to a receiver sheet to form a process color image.

Hayashi discloses recording halftone rendered data on a recording surface (column 3, lines 35-54 of Hayashi) as a plurality of color separation images (column 3, lines 33-34 and lines 60-67 of Hayashi), in superposed registered relationship (column 3, lines 54-67 of Hayashi) and transferring said superposed

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color separation images to a receiver sheet to form a process color image (column 3, lines 60-67 of Hayashi).

Behlok and Hayashi are combinable because they are from the same field of endeavor, namely digital image data processing, correction and alteration in color image data printing devices. At the time of the invention, it would have been obvious to a person of ordinary skill in the art to print an image and plural color separation images on a receiver sheet in superposed registered relationship, as taught by Hayashi, wherein the image is the changed RIP Data taught by Behlok. The motivation for doing so would have been to provide an output for the resultant color image (column 3, lines 33-34 of Hayashi). Therefore, it would have been obvious to combine Hayashi with Behlok to obtain the invention as specified in claim 55.

7. Claims 50, 54 and 58 are rejected under 35 U.S.C. 103(a) as being unpatentable over Behlok (US Patent 6,469,805 B1) in view of Hayashi (US Patent 5,790,282) and Miller (US Patent 5,731,823).

Regarding claims 50, 54 and 58: Behlok does not disclose expressly that said halftoning further comprises modifying said blended first and second halftoned data into a binary file and subjecting the binary image file to an edge enhancement process to reduce jaggedness.

Hayashi discloses modifying said blended first and second halftoned data into a binary image file: After the image data is processed, said image data is sent to the output control circuit, which then generates the signals needed to output said image data (column 5, lines 1-6 of Hayashi). In order to output said image data after processing, the creation of a binary image file for the output in some form, whether on a hard drive, in RAM, *et cetera*, is inherently required. Otherwise, there would no longer be any data to access for the purpose of output.

Behlok and Hayashi are combinable because they are from the same field of endeavor, namely digital image data processing, correction and alteration in color image data printing devices. At the time of the invention, it would have been obvious to a person of ordinary skill in the art to take the output of the blending operation and modify said output into a binary image file, as taught by Hayashi. The motivation for doing so would have been to have the binary data with which to produce an output signal for the printer (column 5, lines 4-6 of Hayashi). Therefore, it would have been obvious to combine Hayashi with Behlok.

Behlok in view Hayashi does not disclose expressly subjecting the binary image file to an edge enhancement process to reduce jaggedness.

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Miller discloses subjecting the binary image file to an edge enhancement process to reduce jaggedness (column 9, lines 50-52 of Miller).

Behlok in view of Hayashi is combinable with Miller because they are from the same field of endeavor, namely digital image document data halftoning and processing. At the time of the invention, it would have been obvious to a person of ordinary skill in the art to enhance the edges in the binary image file, thus reducing the jaggedness in the image. The motivation for doing so would have been to enhance the edge definition in the image (column 9, lines 51-52 of Miller). Therefore, it would have been obvious to combine Miller with Behlok in view of Hayashi to obtain the invention as specified in claims 50, 54 and 58.

Conclusion

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.
 - a. Peter A. Zuber, US Patent 6,035,103, Patented 07 March 2000.
 - b. Edward Neil Chapman, US Patent Application Publication 2002/0067498 A1, Published 06 June 2002, Filed 06 December 2000.
 - c. Cyr et al., US Patent 5,819,014, Patented 06 October 1998.
 - d. Craig et al., US Patent 6,035,152, Patented 07 March 2000.
 - e. Yang et al., US Patent 5,606,395, Patented 25 February 1997.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to James A. Thompson whose telephone number is 571-272-7441. The examiner can normally be reached on 8:30AM-5:00PM.

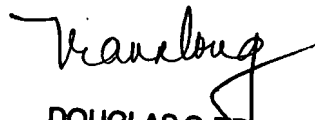
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David K. Moore can be reached on 571-272-7437. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

James A. Thompson
Examiner
Technology Division 2625

JAT
17 June 2007


DOUGLAS Q. TRAN
PRIMARY EXAMINER